



@570170 1900 Sheet 1 of 1

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE ATTY. DOCKET NO. 1280-4014 US4 ENZO-1(C) Div III

SERIAL NO. 07/130,070

APPLICANT David C. Ward, et al.

INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)

	(00.				y ne	cessu	• 37		FILING DATE December 8, 1987	GROUP 18	207	V	
								PATI	ENT DOCUMENTS	•			
EXAMINER INITIAL			росим	ENT N	UMBER			DATE	NAME	CLASS	SUBCLASS	FILING IF APPRO	DATE OPRIATE
	1												
	1												
			L		L		L	FOREIGN P	ATENT DOCUMENTS	1	L	·	``
												TRANS	LATION
	4		БОСОМ	IENT N	UMBER		,	DATE	COUNTRY	CLASS	SUBCLASS	YES	NO
	_												
В													
				C	THE	R DOG	CUME	NTS (Includin	g Author, Title, Date, Pertinent Papers, Etc.)				
pm		Berg JAC	strom S 98:6	, D.E. 5, 1587	and R 7-1388	uth, J (1976	.L., "5	Synthesis of C-	5 Substituted Pyrimidine Nucleosides via Organ	opalladium	Intermediates	•,	
					4	15	89						
AM				F. "Sy (1979		of 5-5	Styryl	Derivatives of	Uracil Nucleosides and Nucleotides", Tetrahedr	on Letters,	19,		
					^								
EXAMINER	Ard	m	m	arse	he				DATE CONSIDERED 5-3-	-93			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-FB-AB20 (also form PTO-1449)

Patent and Trademark Office - U.S. DEPARTMENT of COMMERCE



TO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE 1280-4014 US4 ENZ-1 (C) Div (modified) SERIAL NO Information Disclosure Statement ITT 07/130 APPLICANT (Use several mosts if accessory) David C. Ward, et al. FILING DATE December 8, 1987 1807 U.S. PATENT DOCUMENTS EXAMINER DOCUMENT NUMBER DATE NAME ΛM CLASS SUBCLASS 3 3 2 8 3 8 9 .. FILING DATE 6/27/67 Shimizu et al. AM 260 211.5 3 la lo 8/22/67 Kanzo 260 211.5 AC 3 3 | 8 | 8 | B 12 8/29/67 Wechter ۸M 260 AD 211.5 3 8 0 4 8 26 4/10/74 Schelt et al. 260. 211.5R AE 3 8 9 8 9 8 8 8 7/3/75 John A. Secrist III, et al. AF 260 211.5R 3 9 1 | 5 | 9 | 5 | 8 | 10/28/75 Shuman et al. AM 260 211.5R A G 1 7 5 8 13 11/4/7 Meyer et al. 260 211.5R AH 608 4 6/1/76 0 John A. Secrist III et al. AM 260 6 8 1 01 211.5R 3 9 7/6/76 Christensen et al. AΜ 260 211.5R 0 8 6 3 2/15/77 Luciano Re et al. AM AK 536 28 ٥ 3 8 8 lo 7/26/77 Robins et al. 536 27 FOREIGN PATENT DOCUMENTS DOCUMENT NUMBER DATE COUNTRY CLASS SUBCLASS TRANSLATION AM AL 11/4/76 German Offenlegungsschrift YES ۰. AΜ x 11/4/76 German Offenlegungsschrift MA x AN 5 5 7/1/82 German Offenlegungsschrift 7 AΜ AO d х 8 10/31/79 0 United Kingdom Pat. Appln. 2 $A \wedge \lambda$ AP 2 6 6 9 0/2/6/80 United Kingdom Pat. Appln. Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.) J. G. J. Bauman et al., "A New Method for Fluorescence AM AR Microscopical Localization of Specific DNA Sequences by In Situ Hybridization of Fluorochrome-Labelled RNA" Exp. Cell Res., 128, pp. 485-90 (1980) ["Bauman I"] M J. G. J. Bauman et al., "Rapid and High Resolution Detection of in situ Hybridisation to Polytene Chromosomes Using Fluorochrome-Labeled RNA," Chromosoma (Berl.) 84, pp. 1-18 (1981) ("Bauman II") M AT EXAMINER Marshal DATE CONSIDERED 5-3-93 *EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Drew line through citation if not in conformance and not considered, include capy of this form with next communication to applicant.

FOR PTO-140 U.S. D. ARTMENT OF COMMERCE (modified) 1280-2814 Vs4 ъ SERIAL NO. Information Disclosure Statement ENZ-1 (C) Div. III (Use several thouls If necessary) APPLICANT 07/130.070 David C. Ward, et al. GROUP December 8. 1987 1807 U.S. PATENT DOCUMENTS EXPHINER DOCUMENT NUMBER DATE MAME CLASS 8 3 0 7 SUSCLASS 9/13/77 FILING DA Yokota et al. 424 .. 0 8 180 4/25/78 Ishida et al. AM AC 8 8 6 3 9 5/9/78 536 ol 29 Zappelli et al. 260 AD 0 112.5R 9 6 3/2 6/20/78 Kelly et al. 536 AE 3 9 2 1/16/79 23 7 Boguslaski et al. ΛM 195 4.5 5 1 3 99 4 9 4/24/79 Traeger et al. AM 536 AG 7 1 4 3 2 10/16/79 28 Carrico et al. AH 536 2 3 8 9 3 1 26 7/22/80 Carrico et al. AM 260 A١ 2 2 112.5 8 23 7/10/14/80 Hevey et al. **Δ**~ 435 AJ 3 7 0 6 9 8 10/28/80 Bobek et al. AM 424 AK 180 10/28/8d Boguslaski, et al. 435 7 POREIGN PATENT DOCUMENTS DOCUMENT NUMBER DATE COUNTRY CLASS AM TRANSLATION 2 0 3 4 3 2 3 6/4/80 SUSCLASS AL United Kingdom Pat. Appln. AМ 3 2 0 2 2 9/17/80 United Kingdom Pat. Appln. AM 3 AN 2 5 2 3 9 10/29/80 United Kingdom Pat. Appln. AM 3 AO 2 4 3/14/84 United Kingdom Pat. Appln. ЯM 3-AP 1/26/83 EPO Patent Application Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.) Bayer and M. Wilchek, "The Use of the Avidin-Biotin Complex as a Tool in Molecular Biology," in Methods N AR of Biochemical Analysis, 26, pp. 1-45 (1980) D. Bergstrom and M. Ogawa, "C-5 Substituted Pyrimidine AM **A** S Synthesis Via Olefin Coupling To Organopalladium Intermediates Derived From Uridine and 2'-Deoxyuridine, J. Am. Chem. Soc., 100, pp. 8106-8112 (1978) ["Bergstrom I"] A EXAMINER Marshal DATE CONSIDERED 5-3-93

^{*}EXAMINER: Initial if reference considered, whether or net citation is in conformance with MPEP 609; Oraw line through citation if not in conformance and not considered. Include copy of this form with next Communication to applicant,

j

FORM FT0-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE (modified) 1280-2012 1984 SERIAL ME Information Disclosure Statement ENZ-1 (C) Div. III 07/130.070 Piled By Applicant APPLICANT David C. Ward, et al. FILING DATE December 8, GROUP 1987 1807 U.S. PATENT DOCUMENTS EXAMINER INITIAL DOÇUMENT NUMBER DATE AM CLASS 44 SUBCLASS 7 5 4 1/27/81 FILING DA Bergstrom et al. 424 180 AC 8 9 3 4/14/81 Boguslaski et al. 260 AD 326N 5/12/81 Bergstrom et al. AM 424 AE 2 180 o 11/24/8 Wahl et al. MR 23 AF 230.3 9 8 3/9/82 Boguslaski et al. 435 AM A G 7 3 1 8 9 8 1 3/9/82 Burd et al. AM AH 435 7 8 9 8 3/9/82 Hornby et al. AN 435 AI 7 5 5 1 6 5 10/19/8 Boguslaski et al. n ~√ AJ 544 8 3 5 237 11/9/82 Falkow et al. AΜ AK 435 12/14/R Boguslaski et al. 260 112.7 FOREIGN PATENT DOCUMENTS DOCUMENT NUMBER DATE COUNTRY CLASS AM SUBCLASS TRANSLATION AL 1/26/83 EPO Patent Application YES ЯM -3 8 7/18/79 Great Britain Patent 2 ЯM -33/16 5 2 6 0 9/19/79 Great Britain Patent 2 MR 3 2 4 1 9 33/16 AO 10/18/43 Japanese Patent Application 168 611.2 4/13/83 Japanese Patent Application X. 3007H Other Documents (Including Author, Title, Date, Pertinent Pegee, Ste.) 19/06 x D. Bergstrom and J. L. Ruth, "preparties of C-5 Mercurated Pyrimidine Nucleosides," J. Carbohydrates, Nucleotides and Nucleosides, 4, pp. 257-268 (1977) ("Bergstrom II") Am AR C. F. Bigge et al., "Palladium-Catalyzed Coupling Reactions AM of Uracil Nucleosides and Nucleotides," Soc., 102, pp. 2033-2038 (1980) J. Am. Chem. C. Brandon et al., "Structure of a New Pyrimidine from Bacillus Subtilis Phage SP-15 Nucleic Acid", Nature New Biology, 239, pp. 70-71 (1972) AT EXAMINER Monshel DATE CONSIDERED 5-3-93 *EXAMINER: Initial if reference considered, whether or not ditation to in conformance with MPEP 609; Draw line through attation if not in confermence and not considered. Include copy of this form with next communication to applicant,

		•				•		()				, 0					
	70 may 7 TC) ((mo	di	:ie	(b)		·	\$. DEP	ARTE NO 1	ENT OF CO	MMERCE	1288-2615	9 \$4		Short SERIAL I		25 4
	111	TOE	wa (U)	Fi.	on lec	Di L	iso By	λp	Sure plic	St	atemer	t	APPLICANT	Div.		07/1	30,0	70
<u> </u>						rer .	4n c)e(3	7/ nece	436	(A)		FILING DAY	ac.	War	d, et	al.	
	AMINER		,			_					U.S. 1	PATENT	December 8	, 19	87.	180	1	
IN	TIAL		0	o eu	MEN	TN	Ų M Į	ER	DATE	. ,	T		MAME					
	M	AA'	. 4	1 3	7	4	97:	2 5	2/22	/83	Litma	et al			CLAS	SUBCL	A88	PILING
`	M	48	4	3	8	0 :	5 8	0	4/19/	/83		aski e			435	7		
	M	AC	4	3	8	3 0	13	1	5/10/	83		aski e			435	7	+	
LA	M.	10	4	4	4	6 2	13	1	5/1/8	_	Self	eakī e	tal.		435	7	+	
· A	7	E	4	1	6 9	9 8	F	H	9/4/8						435	7	+	
		F	٦	+	+	+	H	H	27 47 0	4	TS'0 e	tal.			536	27	+	
	1	6	7	7	+2	Ħ	۲	*	4,'2 8,	76	- Poorte	loski ,	* *	+		+	+	
	-	+	+	+	+	Н	4	4						+		+	+	
—		+	+	+	Н	Н	4	1	. 4			31	•	+		-	\perp	
-	AI	+	4	L	Ц		\perp	L	-	T			· · · · · · · · · · · · · · · · · · ·	- -				
-		\perp	\perp	L	Ц					T				\bot		L	1	
<u> </u>	AK	1		П		T	T	Τ		T			(1)	\bot				
-		_	_		_	_		_		٠,	OREIGN S	ATEMS	POCUMENTS	\perp			1.	
-	\bot	00	CUI	EH	TH) m m (ER		PATE	T		COUNTR					_	
AM	AL	8	3	0	2 2	7	6	7/	7/83	1	-			Cr	ASS	SUBCLASS	TRAN	SLATION
PW	AM	8	3	0 :	2 2	7	7	_	7/83				ication	3007	H	19/20	X*	HO
AM	AN	8	3	ola	2 2	닒	6	_	7/83				ication	3007	н	21/00	X*	+-
	AO	\neg	十	+	-	Н	7	-	/03	K	T Paten	t Appl	ication	3012		1/68	-	+
	AP	\dashv	+	+	+	Н	+							1			X* :	+-
	1			Ļ	Ų	\perp	T							+-	-			4
4	. 1	\top		T	ue:	=	<u> </u>	cur	ente	(lac	hiding Aut	ter, Title	, Date, Pertinent Pe	600. E	e.)			
AM	AR	+		• .	•	t	RN	IA.	Gene		dith E	lect	on Microsco	Pic	Vist	alizat	100	-
	 	+				_	_	_		÷٠	J. pp.	363-	23 (10~e)			PAGES,	Nuc	1.
	AS -	+	-R	-	N	-10		n-										
		1		_	-	24	5 7	-	end	Pol	Ynucle	Otide	Gevalent M Biochem	ereu	rati	on of 1	luc 1	
	AT						_	-			Dele			- 007	2, 1	4, pp.	344	-
		T					_	_		_								
EXAMINE	And		n	,		D	0					0.55						
		n	//	a	a	<u>~</u>	e)			_	•	OATE C	ONSIDERED 5-3-9:3					-
SXAMINE	R: tais:							_		-								

^{*}EXAMINER: Initial if reference considered, whether or not citation is in confermance with MPEP 409; Draw line through citation if not in confermance and not considered. Include capy of this form with near communication to applicant.

^{*} United States patent application **Abstract only.



(PTO-1449	odi	fie	d)	- 5	TENT AN	THENT OF COMMERCE TRADEMARK OFFICE	1280-4014 U		Sheet	5_	or 2
1	Infor	mati	on	Dia	101			ENZ-1 (C) D	S 4	SERIAL N		
ľ		USPI	lec	P	À	plica Vacces	nt			- J// -	30,07	0
L					10611	II Aeces	sery)	FILING DATE	C. War	d, et a	1.	
							56	December o		GROUP		
· EXAMIN	EA	200		<u>.</u>		_	U.S. PATENT	DOCUMENTS	1987	180	7	
	+	300	-	THU	MOEA	DATE		MAME				
	AA	_	II	-1	П				CLAS	SUBCLA	55 1, 7	PPROP
	AB	Ŧ	П		\vdash	1			- 1			
	AC	+	╁	+	+	-						
	+	-	Н	44	\perp							
	AD		$ \ $	11								
	AE	\top	П	77					.			
	AF	\dashv	+	++	+					_	+-	
	+-+		4	11	\perp				+	-	+_	
	AG	1.1		П	1				-			
	AH	П	T	П	77	7	+	-	_1			
	AI	77	+	H	₩			. ())			+-	
		++	+	Н	Ц			11.	 		-	
	AJ	Ш	П		П							
	AK	П	П	7	H	17		(al-	1		T	
					Щ					†	+-	
							FOREIGN PATENT	DOCUMENTS				
	_	CUME	NT N	UMBE	-	DATE	FOREIGN PATENT	DOCUMENTS				
	AL D	CUME	** **		1	DATE		DOCUMENTS	CLASS	SUBCLASS	TRANS	
	_	CUME	 		-	DATE		DOCUMENTS	CLASS	SUBCLASS		LATION
	AL AM	CUME	NT N	UM 8 E		DATE		DOCUMENTS	CLASS	SUBCLASS		
	AL	CUME		UM0 2		DATE		DOCUMENTS	CLASS	SUBCLASS		
	AL AM	CUME	MY 10			DATE		DOCUMENTS	CLASS	SUBCLASS		
-	AL AM AH	CUME		<u> </u>		OATE		DOCUMENTS	CLASS	SUBCLASS		
	AL AM AN AO				#		COUNT	DOCUMENTS		SUBCLASS		
-	AL AM AN AO		the)E E	T NOGI	iments	COUNT	DOCUMENTS RY			YES	No.
	AL AM AN AO		the) E C	Dogu	iments	COUNT	DOCUMENTS RY Let on the control of	500, E(c.)		748	NC
	AL AM AN AO AP		the	PF C	Document of the state of the st	iments	COUNT (Instuding Author, Till 51. "The 3 Nucleotides C	DOCUMENTS AV A, Dete. Pertinent Pa	ine yas	tie ful	ymos i	No.
	AL AM AN AO AP		the	PF C	Document of the state of the st	iments	COUNT (Instuding Author, Till 51. "The 3 Nucleotides C	DOCUMENTS AV A, Dete. Pertinent Pa	ine yas	tie ful	ymos i	No.
	AL AM AN AO AP	0 R.	the M.	- X - X - X - X - X - X - X - X - X - X	Document of the control of the contr	iments always a of for Net!	(Instuding Author, Tile 51. "Tire 5 Nucleotides Chief Acid	bocuments Av Av Av Av Av Av Av Av Av A	Enzyme Foury ad Stru- 2238-2:	tre Pol- Potont- cturs1 242 (19	ymosi ial Analy	615,
	AL AM AM AO AP	0 R.	the M.	- X - X - X - X - X - X - X - X - X - X	Document of the control of the contr	iments always a of for Net!	(Instuding Author, Tile 51. "Tire 5 Nucleotides Chief Acid	bocuments Av Av Av Av Av Av Av Av Av A	Enzyme Foury ad Stru- 2238-2:	tre Pol- Potont- cturs1 242 (19	ymosi ial Analy	615,
n A	AL AM AM AO AP	0 R.	the M.	To Of Esc	Dog:	iments of for Net iii as and	(Including Author, Tite 3 Nucleotides Cited Acid Acid Acid Acid Acid Acid Acid Aci	bocuments av ie, Dete, Pertinent Pag ynthrests end- ontaining Mer ontaining ar USA, 70, pp "Molecular an ing for Enter	tee, Etc.) Enzyme Foury, ad Structure 2238-2:	tre Fri Potent etural (19 (19 (19 (19 (19 (19 (19 (19 (19 (19	ymosi ial ial ymasy 73)	515,
n A	AL AM AM AO AP	0 R.	the M.	To Of Esc	Dog:	iments of for Net iii as and	(Including Author, Tite 3 Nucleotides Cited Acid Acid Acid Acid Acid Acid Acid Aci	bocuments av ie, Dete, Pertinent Pag ynthrests end- ontaining Mer ontaining ar USA, 70, pp "Molecular an ing for Enter	tee, Etc.) Enzyme Foury, ad Structure 2238-2; ad General	tre Fri Potent etural (19 (19 (19 (19 (19 (19 (19 (19 (19 (19	ymosi ial ial ymasy 73)	515,
n A	AL AM AN AO AP	0 R:	s.	Dr E	Document of the second of the	iments sly v for for Nat! iii as and DNA Serichia sJalas	(Including Author, Tite 3 Nucleotides Cited Acid Acid Acid Acid Acid Acid Acid Aci	bocuments No. Dete. Pertinent Par Thirties is end- ontaining Mo- ontaining as USA, 70 con	tee, Etc.) Enzyme Foury, ad Structure 2238-2; ad General	tre Fri Potent etural (19 (19 (19 (19 (19 (19 (19 (19 (19 (19	ymosi ial ial ymasy 73)	515,
n	AL AM AN AO AP	0 R:	s.	Dr E	Document of the second of the	iments sly v for for Nat! iii as and DNA Serichia sJalas	(Including Author, Title 5 st., "The 5 st., "The 5 st. "The 5 st. "The 5 st.	be, Dete, Pertinent Par yrithresis erro- entaining Med Sequencing er USA, 70, pp. "Molecular ar- ing for Enter eenth Joint ve Medical S	tee, Etc.) Enzyme Foury, ad Structure 2238-2; ad General	tre Fri Potent etural (19 (19 (19 (19 (19 (19 (19 (19 (19 (19	ymosi ial ial ymasy 73)	615,
A	AL AM AN AO AF	W. W.	m.	Too Escape of Es	Dogue De la	iments ale vi for Nat; as and DNA Serichia SJas	(Including Author, Tit ### ### ############################	bocuments av ie, Dete, Pertinent Pag ynthrests end- ontaining Mer ontaining ar USA, 70, pp "Molecular an ing for Enter	Enzyme Foury: nd Struct 2238-2: nd Gener cotoxin Confere	tre [m] Potent etural 242 (19 tic Anal snyther ence on Program	ymas; ial maly 73) ysis is Chole	sera,

			•						•	\ni				1) .					
1 1	€v. 7.	• • •	(mc							-\$. D	T AND	THENT OF COMMER O TRADEMARK OFFI	SE.	1280-4012 ENZ-1	49. US4		SERIAL		6	4 25
			((P	ij	ed	į	Ž.	À	pp)	ca Lca	Statement nt (3207)		ENZ-1 (C)				30,	070	
_						•••			V U 12		ecas.	sery)		FILING DATE	TH C	. Waz	d, et	al,		
-			_									U.S. BATTE	_	December OCUMENTS	8, 19	987	180	- 1		
INIT	MINER	1	T	900	CUM	EN.	T N	UM	O EX	T	ATE	U.S. P2121			•,			_		
		AA	_		I	I	I	T	T	+		· ·		MAME		CLAS	5 50 80	LASS	10 %	LING C
_		AB		_	1		T	T	T				_							
L	- 1	AC	Г	T	T	T	T	†	T						10.					
	\neg	AD	T	Ť	†	Ť	+	t	+	-									_	
		AE	┢	+	+	╁	╀	⊦	Н	_							_	-		
_	\dashv	AF	⊢	+-	╀	┞	┞	Ļ	Н	4				·				_		
	-+		_	╀	L	L	L		Ц	۳.				-	$\overline{}$		-	-		
	\dashv	46		Ŀ	Ц	Ш			П				_	4				\perp	,	
	_	AH		Ш					T	,	-							- 1		
		41		П		7		7	T						$-\bot$					
	T			П	7	7	+	7	+	_					_			\top		
	7	K		+	+	+	+	+	+						\top		1	+		
		_	_	_	4	┸	\perp	1	L						-		_	+	<u> </u>	
	\neg	T	_		_	_			_			FOREIGN PATER	IT E	OCUMENTS				丄		
	+	+	7	UMI	-	NU	-	ER	L	DAT	•	COU	ITR	ν ,		CLASS	Taur	-		
	^^	4	1	\perp	L	L	L	L					_		-		SUBCLAS		ES	ATION
	^	•	1	1		Γ	Γ	Γ	Γ											
	A	·T	T	Τ	T	Τ		h	卜		\dashv	· ·						4		
	AC	1	T	T	1			H	┝		\dashv							\top		
	AF	+	十	+		Н	Н	Н	_		+				T			+	\neg	
		Ц_	_	Ļ	Щ	Ц	Ц	Ц			\perp			. 1	\top			╀	\dashv	
	Į.	Т			75.	16:	-	<u>Dc</u>	CU	me	ts	including Author, 7	itte	, Dete, Pertinent	Pages.	E(c.)		_		
M	AR	\vdash	ł	W	•															
	(A)	,	-				<u>En</u> an Pr	d e	A S	onm P	ent uhl 979	er, editors	er	cial Importante Elsevier/	rtanc	e, K	Medic N. T	al mm;	is	on.
m	AT		- D	•	J.	01	•	20 21	, nu	EUI	. 01	en Affini	ty.	Label De	nce				in	- 4 T
AMINER		_				=	<u>=</u>	<u>-</u>	<u>J.</u>	Bi	OC)	nem., 82, p	p. *	225-34 (1	978)	<u>li</u> Ri	bosome	8, H		-

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant,

DATE CONSIDERED





FOR FT0-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARE OFFICE Sheet_ (modified) 1280-4014 US4 SERIAL NO Information Disclosure Statement 07/130.070 Piled By Applicant David C. Ward, et al. December 8. 1807 U.S. PATENT DOCUMENTS PEXAMINER DOCUMENT NUMBER DATE MAME CLASS SUBCLASS 44 IF APPROPRI AC ΑD AE AF AG AH AI AK FOREIGN PATENT DOCUMENTS DOCUMENT NUMBER DATE COUNTRY CLASS SUBCLASS TRANSLATION YES AM AN AO Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.) Ya. Feldman, <u>Reactions of Nucleic Acids and Nucleoprateins</u>
<u>With Fermaldehyds</u>, ___Ed. (19__) H. G. Gratzner, "Monoclonal Antibody to 5-Bromo- and AM 5-Iododeoxyuridine: A New Reagent for Detection of DNA Replication, "Science, 218, pp. 474-475 (1982) A\$ M. Grunstein and D. Hogness, "Colony Hybridization: A Method for the Isolation of Cloned DNAs That Contain a No AT Specific Gene", Proc. Natl. Acad. Sci. USA, 72, pp. EXAMINER Aidn Marshel DATE CONSIDERED 5-3-93 *EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 607; Draw line through citation if not in confermence and not considered. Include capy of this form with next communication to applicant.



1449 (mc	ndi	Eie	(b)		Ų.	SHT AND THE	TOF COMMERCE	1280-401	4 9 s4	Si	ERIAL HO.		=
					lo	sure Sta	tement	APPLICANT		,		070	. "
(Pi	le	d i	χ.	λpi	plicant)	Da	vid c.	Ward,	et al.	-	
							•				1807		_
							U.S. PATENT						
	000		NT:	NUMI	ER	DATE		HAME		CLASS	SUBCLASS	IF APPRO	34
AA		T	Τ	Π	T			111			1		
AB	1	T	Τ	П	T						 		
AC		T	T	П	T					i —	†		
AĐ		T	T	П	T	14					1		-
AE		\dagger	T	П	\dagger	·				-	1	 	
AF		十	T	П	十				7		1	 	
AG		1	T	П	T	7					۸.	 	
AH		Ť	T	П	十					·		·	
Al		T	T	П	T				gav.		1	1	
AJ		T	Т	П	T	1 1							
AK		T	T	П	T							1	
							FOREIGN PATE	NT DOCUMENT	78			-	
	00	EUM!	ENT	HUM	DER	DATE	co	UNTRY		GLASS	SUBCLASS	TRANSL	HOITA
AL		T	Ι	П	T						1.		
AM			T	П	T			-					
AH		П	T	П				*					
AQ	Π	Π	T	П	T	* 1		(74)					
AP	Γ		Ι	П		1,7				1			
			_		r 1	Document	g (Including Author	s, Title, Date,	Pertinent P	eges, Etc.)			
		_											
AR	L	-		L.	Gi In	lmmuno	t al., "Th enzymatic T 131-39 (197	e Use of echniques	Avidin	-Bioti	n Intera hem. and	action d Cyto	chem
AR	E			L.	Gu In 27	lesdon (Immuno) , pp. 13	nzymatic T 131-39 (197 K. Nakanis	e Use of echniques 9) thi. "Synt	Avidin	-Bioti Histor	hem. and	<u>Confic</u>	chem
AR				L. Ha	Gu In 27 ya ra	lesdon (Immuno) , pp. 13 shi and tion of	nzymatic T 131-39 (197 K. Nakanis (+)-5-(4',	e Use of echniques 9) thi, "Synt 5'-Dihyd	Avidin	-Bioti Histoc and Ab	solute	d Cyto Confiq	chem ru-
AS		1	н.	L. Ha	Gin 27 ya Ba J.	Immunoe, pp. 13 shi and tion of cillus Am. Ch	Enzymatic T 131-39 (197 K. Nakanis (+)-5-(4', Subtilis Pr em. Soc., S al. "Struct	e Use of echniques 9) shi, "Synt 5'-Dihydr sage SP-1: 95, pp. 40 ture and	Avidin ", J. Thesis Toxyper Deoxy 081-400	and Abatyl)un yribonu 33 (19)	osolute racil fr icleic A 73) [Hay Dihydro	Config com cid,"	ru-
		1	н.	L. Ha	Cin 27 yara Ba J.	Immunoe, pp. 13 shi and tion of cillus Am. Ch	nzymatic T 131-39 (197 K. Nakanis (+)-5-(4', Subtilis Pr em. Soc., S	e Use of echniques 9) shi, "Synt 5'-Dihydr 18ge SP-1! 95, pp. 4 ture and : ophage SP 95, pp. 8	hesis roxyper Deox 081-400 Synthe -15 De 749-87	and Ab atyl)ur yribonu 33 (193	bem. and solute racil fraction A	Configon com cid," ashi xypen	ru-
AS	And	1	н.	L. На	Cin 27 yaa Ba J. yau J.	Immunoe, pp. 13 shi and tion of cillus Am. Ch	mzymatic T i31-39 (197 K. Nakanis (+)-5-(4', <u>Subtilis</u> Pr <u>em. Soc.</u> , ? al. "Struct	e Use of echniques 9) thi, "Synt 5'-Dihyd: lage SP-1! 55, pp. 46 ture and ophage SP 95, pp. 8	hesis roxyper Deox 081-400 Synthe -15 De 749-87	and Ab atyl)ur yribonu 33 (193	bem. and solute racil fraction A	Configon com cid," ashi xypen	ru-
	AA AB AC AD AE AF AG AH AI AA AK AL AM AM AQ	AA AB AC	DOCUMENT AL	OCCUMENT AA AB AC AP AC AB AC AB AC AD AC AC AC AC AC AC AC AC	COCCUMENT HUMI	OCCUMENT NUMBER AA AB AC AC AC AC AC AC AC AC	DISCLOSURE SECTION DISCLOSURE SE	FOREIGN PATE OCCUMENT NUMBER DATE AA AB AC AB AC AC AC AC AC AC	APPLICANT APPLIC	FOREIGN PATENT DOCUMENTS OCCUMENT NUMBER DATE APPLICANT U.S. PATENT DOCUMENTS NAME AA	APPLICANT DISCLOSURE STATEMENT (Use several shoets for accessary) U.S. PATENT DOCUMENTS U.S. PATENT DOCUMENTS AA	APPLICANT David C. Ward, et al. Filling pays David C. Ward, et al. Filling pays David C. Ward, et al. Filling pays December 8. 1987 1807	APPLICANT David C. Ward, et al. Filing pare David C. Ward, et al. Filing pare David C. Ward, et al. Filing pare December 8. 1987 1807 1807 December 8. 1987 1807 December 8. 1987 1807 December 8. 1987 December 8. 1987 December 9. 198



TIREV.	0.144	mod	dji i	fie	d)	•	V-1-05P	ARTHENT OF COMM	ERCE	1280-25F	7 NO		Shoo	9	25
I	nfo	CMA	ŧί	On	ni	1		7. <u>1</u> .		ENZ-1 (C	4 "0"84) Div		SERIAL M	0.	
1		(U s	P1	Tec	, P	Y. A	pplic	ant						30,0	70
-				-				,,,	- 1	FILING DATE	ATG C	. War	d, et a	11,	
<u></u>							,	4 5 0 0		December	8, 1	1987	1807		
PEXAMINE.	٠/	To	oėų	MEN	T MI	MBE	1	U.3. PA1	ENT D	OCUMENTS			1007		
	AA	+-	Ť		_	7	POAT		N	MAME		CLASS			
	1-0	╀-	1	Ц	\perp	Ш						-	\$UBCL.	10 2	LING DA
	AB	1	1	П	1	ΓT				111	٦.	Ŀ	1.		
	AC		П	\vdash	+	††	+			- 0				_	
	-	 	Н	+	+	Н	-						+		
	AD		Ш	\perp		П	1	*						-	
	AE	- 1		T	Γ						1				
	AF		7	+	\vdash	+		*						+-	
		+	+	+	Н	4									
	AG			1	П									1	
	AH	T	Т	Т	П	\top					.				
	AI	\top	+	+	\vdash	╁						-	 	+	
-	\rightarrow	+	+	Н	4	Ш					\rightarrow		11		
	AJ		1	П	-	П		*			$-\!\!\perp$		1		
1	AK	T	T	П	$^{+}$	††					·			1	
			_	Ц	┸	Щ		1			_		 	┼	•
								FOREIGN PAT	ENT D	OCUMENTS				1	
	_l°	0CU	MEN	TN	/M @ (: n	DATE		UNTRY						
_ ^	١	П	\Box	T	T	\sqcap	1	-			. 1	CLASS	SUBCLASS	TRANS	ATION
4	4	H	7	+		+								YES	NO
-	4	Н	4	\perp	Ш						_				
AI	١	П	-1	1	П	T									
AC	,	\sqcap	\top	+	Н	┿									
	-	$\vdash \vdash$	+	+	Н	4					\neg				
AP		Ш	\perp	\perp	Ш										
			Ot	he	7	oci	ment	Clackeding Author	-						
n I		к.	H	of	nan	n e	t al	"Iminobi al of Stree 1980)	Fille,	Dete, Pertinent	Pages,	Etc.)			
M AR	М	77	, 1	DD.	To	Re	triev	al of Stre	otin <u>Ota</u> n	Affinity	Colu	mns A	nd The	ir An	nli-
	\vdash	Ε.	s	. 1	lua	na	-00 (and :	1980)			Je. N	atl.	Acad.	ci.	JŠĀ,
W As	$\sqcup 1$		-	Te	ch	uo J	ogy a	. S. Paganond Detection	0, "1	Nucleic A	cid F	ivbrid	1172+1-	_	
^*					_	•	-, PP	• 43/-497 ((197	7 \		·villes,	metno	ds.	
	┤.	Α.	M.	3	-6	e									
\				De	ri	vat	ive F	al., "Benzo ound In Viv	1 = 1	Pyrene-N	uclei	c Aci	d		
-	\neg			Py	re	net	etrah	al., "Benzo ound In Viv ydrodiol Er <u>Soc.</u> , 98,	70; S	tructure	of a	Benz	0[2]	-	
INER .	<u>-</u> _			<u>-</u>	_^	п.	Cnem.	Soc., 98,	Pp.	5714-571	10 e A 5 (10	dduct	, " ·	_	·
M/A	In	N	1 4	us	0	,		0	ATE C	ONSIDERED	- 119	, 0 ,			1
									*	7 00					
RIMER: In. Aformoneo	itiel il	refe	re n	ee e	one i	lored	, whether	or not citation is this form with non	la ant						
						e i y de	4007 0	this form with non	re testi I Comm	semence with Mi	PEP 609;	Drew lin	o through c	letter if	





FOR (TO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE (modified) 10 25 1280-2674 Mgs4 SERIAL NO. Information Disclosure Statement ENZ-1 (C) Div. III 07/130,070 Filed By Applicant (Use several facets if necessary) APPLICANT David Ward, et al. FI'ING DATE December 8, 1987 GROUP 1807 U.S. PATENT DOCUMENTS EXAMINER INITIAL DOCUMENT NUMBER DATE NAME CLASS 44 SUBCLASE FILING DA 48 AC AD AE AF AG AH AJ FOREIGN PATENT DOCUMENTS DOCUMENT NUMBER DATE COUNTRY CLASS SUBCLASS TRANSLATION ΔO AP Other Documents (Including Author, Title, Bete, Pertinent Pages, Etc.) R. G. Kallen et al., The Occurrence of a New Pyrimidine Base NM Replacing Thymine in a Bacteriophage DNA: 5-Hydroxymethyl AR Uracil, J. Mol. Biol. 5, pp. 248-250 (1962) MA Kennel, "Principles And Practices of Nucleic Acid ization" Pro. Nucl. Acid Res., 11, 259-301 (1971) AS Koreeda et al., "Alkylation of Polyguanylic Acid at the Hybrid-2-Amino Group and Phosphate by the Potent Mutagen M (±)-78. 8a-Dihydroxy-95.108 epoxy -7.8.9.10-tetrahydrobenzolajpyrene, J. Am. Chem. Soc., 98. AT

PP. 6720-6722 (1976) EXAMINER Marshel DATE CONSIDERED 5-3-93

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not Considered. Include capy of this form with next communication to applicant.



120.	Infor	mo	ti	0	n	מ	i = .	-1	05	Statement	FFICE	1286-251 ENZ -1 (C	4 0s4) Div	. III	Sheet SERIAL NO	•	4 25
		(U.		50	ver	e!	X .	À	pplica Filmece	nt reacy)		FILING DATE	viaic	. Ward	, et a	1.	,
· EXAMIN		_			_		_			U.Ş. PA	TENT	December DOCUMENTS	8, 1		1807	1	
INITIAL	-	L	oçı	U M	EN	T 4	101		DATE			NAME					
	AA	Ŀ	\perp	I	T	1	T	T						CLASS	SUBCLA	15 7	PROPE
	AB		T	Τ	T	T	7	7									
	AC	Γ	\top	T	T	†	†	†	+	+			-				
	AD		T	t	+	†	+	+	+								
	AE	-		H	$^{+}$	+	+	╁	 	-						1	
	AF		Н	H	+	H	╁	╁	 							+	
	AG	_	Н	-	╁	ŀ	╀	Н		-					1	+-	
	AH	_	Н	_	┞	┞	╀	Н								+	
	1	-	4	-	H	L	L	Н							 	├	
	A1	4	4	4	Ц	L	L	Ц						· ·	-	-	
	AJ	4	1	1												-	
	AK		\perp	1	- 1	1		1									
										FOREIGN PA	TENT	DOCUMENTS					
		90C	U M 6	N	T 4	UM	8 C (٠Ţ	DATE	1	EQUNT						
	AL	T	Τ	T	T	T	T	1						CLASS	SUBCLASS	YES	LATION
	AM	T	Τ	T	T	Ť	7	T			·						
	AN	\dagger	T	t	\dagger	†	+	+									
	AO	╁	H	t	+	$^{+}$	╁	╀									
	AP	+	-	┝	+	+	+	╀				4100					
<u></u>			بــ	Ļ	Ţ	Ī	Ť	L	· .								├
		T	T		T	E		00	ument	(lactuding Auth	or, Til	e, Dete, Pertine	nt Pages	, Etc.)			
M	AR					t X	he ar	i I	Deoxyr	., "5-Met ibonuclei s oryzae,	hylc c Ac J.	ytosine R id of a B <u>Mol. Bi</u> o	eplac acter	ing Cy	tosine for	in	
	AS -	I_	P .	_	R	_	1	_									
1	A.T.		-	,		1	10	yı e.	Nati	tides: No head. S	vel ci.	uic Synth N ucleic A USA, 78,	esis cid / pp. (of Bio ffinit	P tin-La Prob / (1981	belec es",	-
MINER	A	nd	<u>-</u> کہ		N	la	us	l	1		DATE	CONSIDERED					
AMINER:	Initial	if ,	ofer See	•		-	nsic	lore	id, whethe	er not citation	ie ie e	ofernance with	4859 4				





rome FTO-1447 (mev. 7-49) (modified) U.S. DEPARTMENT OF COMMERCE 1280-4014 US4 Information Disclosure Statement ENZ-1 ((C) Div Piled By Applicant 07/130.070 David C. Ward, et al. FILING DATE December 8. 1987 U.S. PATENT DOCUMENTS 1807 EXAMINER DOCUMENT NUMBER DATE NAME CLASS 44 SUBCLASS IF APPRES 48 AC AD AE AF A G AH AJ AK FOREIGN PATENT DOCUMENTS DOCUMENT NUMBER DATE COUNTRY CLASS TRANSLATION SUBCLASS AL YES . AO AP Other Documents (Including Author, Title, Dete, Pertinent Pages, Etc.) Langer and D. C. Ward, "A Rapid and Sensitive Immuno-M AR logical Method For In Situ Gene Mapping," in Developmental Biology Using Purified Genes, ed. D. Brown, Academic Press, pp. 647-58 (1981) 45 P.R. Langer and D. C. Ward, Abstract 1153: "A Rapid and Sensitive Immunological Method For In Situ Gene Mapping," in Journal of Supramolecular Structure and Cellular Biology, ed. Alan R. Liss, Inc. (1981) ("Langer III") NM AT EXAMINER Marsilvel 5-3-93 *EXAMINER: Initial if reference considered, whether or ner citation is in conformance with MPEP 609; Draw line through citation if nor SAAMITER: Intret it reterrate ventrates, who may a new visit of the communication to applicant, in conformance and not considered. Include capy of this form with next communication to applicant,





_	Info	(Use	ile	3 D	PX.	-1	ure S lican		Decembe	vid c		GAOUP	30,07	
PEXAMI	HER	Tag			HUM			U.S. PATENT	DOCUMENTS		1907	180	7	
	AA	1	T	<u> </u>	T	+	DATE		HAME		CLASS	SUBCLA		11 1940
		╆╌╁	+	+	H	++-			•			-	10.	PPRO
	AC	1-1	+	H	\vdash	#						_	+	
	-	$\vdash \vdash$	+	Н	+	Н.						+	4_	
	AD	4	\perp	Ц	\perp	Ш				-		-		10
	AE	\perp	L	Ц	\perp									
	AF	\perp	П		T	П				7.1				
	AG	T.	П	T	Π									
	AH	\top	П	T	$\dagger \dagger$	+								
	AI		7	十	Ħ	+	-						1	
	LA	\dashv	\dagger	+	₩	┿							 	
	AK	+	+	+	₩	+							+	
		\perp	_	بــــــــــــــــــــــــــــــــــــــ	Ц								-	
		OCUM				_		FOREIGN PATENT	POCUMENTS					
	AL	77	_	708	- CR		TE	COUNT	IY		ELASS	SUBCLASS	TRANSL	ATIO
		++	+	H	\bot					_			YES	
	AM	11	\perp	Ц						-				
	AN	Ш		Ш			·							
			\Box	Т	П					\dashv				
	AO	Ш	11							- 1	- 1	T		-
	AO AP	+	Н	+	H									
	-	Н,				Cum	ent s@	Shiding Author St.	Ŷ					_
w l	AP	1.	Deh R	_ 12	3 E.O.	a u.,		neluding Author, Tiel	"On + b - c					
n	-	1.	Deh R	_ 12	3 E.O.	a u.,		TO PEACE.	"On + b - c			f the Coliphac	lucos	sy-
	AP			T2	ite.	T 4	and	methylcytos 6, J. Biol	"On the sine Nucleo Chem. 23	truct tides	of C	f the Coliphac	lucos es (1960	3y-
mt	AP			T2	ite.	T 4	and	methylcytos 6, J. Biol	"On the sine Nucleo Chem. 23	truct tides	of C	f the Coliphac	Glucos ges (1960	sy-
m	AP	E.	т	T2	lag	d Hy T 4	and (ed.	methylcytos f6, " J. Biol .), Enzyme-I	"On the sine Nucleo Chem. 23	EIdes 5, pp	01 C	96,97,16	59-179	3y- 0) (214
M	AP	E.	T	TZ . M	lage	gio	and (ed.	methylcytos 6, J. Blol 1, Enzyme-I	"On the sine Nucleo	5, pp	of C	96,97,16	59-179	3y- 0) (214
^ ^	AP	E.	T	TZ . M	lage	gio	and (ed.	methylcytos 6, J. Blol 1, Enzyme-I	"On the sine Nucleo	5, pp	of C	96,97,16	59-179	3y- 0) (214
M	AP	E.	T	ng on on on	lag	gio	and (ed.	methylcytos (6, J. Biol), Enzyme-I Method for Biotin Inter Bosomal RNA (1977) [Man	"On the sine Nucleo	5, pp	of C	96,97,16	59-179	3y- 0) (214

•	III	lfor	mat	ion	ni.	- 1 -	Sure Splican	THENT OF COMMERCE TRACEMARK OFFICE LATEMENT t t ary)	1280-4014 ENZ-1 (C)	ÜS4 Div. II		30.07	
							-	111 CARRIE	December of	1987	180		
	PEXAMINER		900		NT NU	WB 50	DATE	U.S. PATENT	POCUMENTS		100		
		AA	. 1	$\neg \neg$	$\overline{}$	1	-		NAME	CLA	SS SUBCL		
. 1			-	++	+	1			(e)		-		
1		A.	_1	$\perp 1$		Ш							
L		AC	T	П	\Box				1.00				
- 1		AD	1	11	+1	++						+	
		45	+	₩	+	44						+	
F				Ш	Ш	\perp 1			der.				
L		AF	- 1	П	IT	TT							
*	T	46		\vdash	11	++						+-	
		AH	++	+	++	11						+	
-		-	++	_	Ш	Ш							
<u> </u>		11	11	1	П	IΤ				<u>. </u>			
- 1		,	Π		\vdash	+						—	
			++	+	-	₩						+-	
-			Ш	Ш		Ш	- 1			+	100		
-								FOREIGN PATENT (000				
_		00	CUME	NT N	-	•	DATE	COUNTR					
	Al	.	\prod	TT	T	+		TOURTE		CLASS	SUBCLASS	TRANS	ATION
	4		+	++	╁	+					+	765	NO
-			4	Ц	$\perp \! \! \! \! \! \! \! \! \! \! \perp \! \! \! \! \! \! \! \!$	\perp	1			+	+		
_	AH	11		П	Π	T^{-}				-			
1	40	П			††	+-	 -						_
	AF	H	+	+	₩	╀-							
-		\sqcup	Ш	\perp	Ш		. [-de-	 		`.	
			0	the	E D	ocu	Bents(scluding Author, Title	Data Books				-
1	1 48	Ш	J.	E.	Ma	nni	20.00	-1 "-	Jete, Pertinent Pa	ges, Etc.)			
MN				- '	Chr	omo	Soma (Berl) 53 m	Method Of i	n situ	Hybridi	zatio	- 11
AN	`									/1075	Mannin	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4
-		4	_		_			•	P. 10/-11/	(12/2)	T ermitti	.a 11	- 7
AN		1	J.	Mar	rmu	et	al.,	al., "A New Berl), 53, p	erties of	(19/5)	[9 11	7
-			J.	Mar	mu:	11u	al., s Sub	"Unique Prop	perties of	Nucleic	Acid f	rom	7
-	As As		J.	Maz E	ac:	11u 68-	al., s Sub 70 (19	"Unique Prop tilis Phage (972)	perties of 1 SP-15, Natur	Nucleic re New	Acid f	rom , 239	£
-			J.	Maz	mu; Bac;	11u 68-	al., s Sub 70 (19	"Unique Prop tilis Phage (perties of	Nucleic re New	Acid fr Biology	rom , 239	£.
AP	AT AT			Ē	Baci	11u	al., is Sub 70 (19	"Unique Proj tilis Phage (772)	perties of	Nucleic re New	Acid fr Biology	rom , 239	₹
-	AT AT			Ē	Baci	11u	al., is Subt	"Unique Prop tilis Phage (172)	perties of P SP-15, Natur	Nucleic re New	Acid fr Biology	rom . 239	7
AP.	AS AT	Ardi	<u> </u>	Ma	Baci pp.	68-	11., 18 Sub: 70 (19	"Unique Proj tilis Phage (972)	ONSIDERED	Nucleic re New	Acid fr Biology	rom , 239	T
APP EXAM	AS		<u> </u>	M _a	Baci pp.	11u 68-	s Sub: 70 (19	"Unique Prop tilis Phage (172)	ONSIDERED 5-3-93	Vucleic re New	Acid fr Biology	rom , 239	T

:	18. ₹		OF	mat	ьi.		_		-1.		_	tement	MERCE OFFICE	1280-2014 ENZ-1 (C)	US4	III	Shoot N		_ = =
				(0.	•	44.	rei	S.	· À	Plic	e Sta Cant Cosseny)			d C. W		07/	30	070
ŀ					-									December 8	- U. W.	T	et a	1.	
F	EXAMIN	EA		_		_				_		' U.S. P.	ATENT	POCUMENTS	1987	_	1807		
F	MITIAL	_	_	-00	150	461	17 1	NUM	968	DAT	78			NAME					
-		1	14.		L				Т						CL	A 5.5	SUBCLA		FILING D
		4	•	1		7	٦	\top	T		_				9.0			\top	
- 1		1	c	\neg		7	7	+	+	_	-							+	
Г		1		\dashv	7	+	+	+	Н		_			1		_	-	+	
<u> </u>		-	+	+	+	+	+	4	Ц									\bot	
-		_ A	4	4	1	\perp	\perp	\perp	Ш		T								
<u> </u>		14	'_	\perp	1		1	Γ	П	:								T	
L		40		T	T	Τ	Τ		\vdash		-							1	
		AH	au	ナ	+	十	十	Н	+		-							+-	
		AI	+	+	╁	╁	⊦	Н	+							\dashv		╀	
<u> </u>		-	+	+	L	L	Ц	Ц	\perp		- 1					+		丄	
-		-AJ	L	\perp	L	L		П	T		7					\perp		1	
		AK	l	П		П	7	T	T		+								
					_		_		_		بال					\top		-	
			••	CUM	EN	TH		_	T-		701	REIGH PA	TENT O	OCUMENTS					
	\neg	AL	_		7	_	7	7	┞-	OATE	\bot		COUNTRY	7	CLASS	Τ.	UBGLASS	TRA	SLATION
_	-+		-	+	+	4	+	+	L		\perp				+	+		YES	NO
-	-	A#	\Box	⊥	1	1		1	1						+	4			
		AH	- 1		T	Τ	Τ	T		-	1	<u> </u>				1			
1		40		\top	+	T	十	Н	-	-	+-			-	1	T		1	+-
		40	+	+	╁	╀	⊦	Н								+			+
			1	丄	L	L		Ц							+	╀			<u> </u>
	\top	\neg	_	_	<u>ot</u>	<u>he</u>	Ξ.	Do	CU	ment	g (Inclu	ding Auth	w. Title	, Dese, Pertinent Pa		丄			
1 100	1/4	R -	4	1.	٧	٧.	M	un di	ns fi	and	M. 1	K. Lis	zews	ki, "Antibo Immunochem	des, Elej				
[CW	\perp		1			1	th	e	İs	olat	ion	otides	: An	ki, "Antibo Immunochem terization	ical A	Pec	ific :	for	
1		T	7			1	n	P	roc	res	s in	Nucle	ic Ac	Immunochem terization id Researc Academic P	of Nuc	lei	C Acid	ior is."	_
l	^	s -	+			(Ť	98	227	(, e	a. w.	. E. C	ohn,	id Researc Academic P	ress.	24	ecular		
	+-	+	1													•,	PP. .	.09-	165
AM	\ A1	Ļ	•	•	мe	3 T :	OI	7	and	D.	Brut	lag,	"Addi	tion of Hor ith Termina					
			Γ			M	et	hc	ds	in	Enzy	plex p	DNA W	tion of Hor ith Termina 1. 68) Reco	l Tran	ers sfe	to t	he	
EXAMIN		1	1		_				-	50					mbinan	t D	NA, e	1. P	. Wu,
		Mad	m	/	M	a	لم	he	1		•	T	DATEC	CHSIDERED					
"EXAMII	MER: :	Initial	if ,	efer	***	• •	•	ide	od,	-heihe				5-3-	43				•

)	
1	(۰

19 E 1. 7-19 U.S. DEPARTMENT OF COMMERCE (modified) 1280-4014 US4 16 . 25 Information Disclosure Statement ENZ-1Piled By Applicant Div APPLICANT 07/130.070 David C. Ward, et al. GROUP <u>December 8.</u> 1987 U.S. PATENT DOCUMENTS 1807 · EXAMINER DOCUMENT NUMBER DATE NAME CLASS . SUBCLASS F ADDROOM 48 AC AD 4.5 AG. AH AI AJ ٠, 4K POREIGN PATENT DOCUMENTS DOCUMENT NUMBER DATE COUNTRY CLASS SUSCLASS AL. TRANSLATION ¥68 NO 4 M AN AO Other Documents (Including Author, Title, Dete, Perlinent Pages, Etc.) Pellegrini et al., "Application of the Avidin-Biotin Method of Gene Enrichment to the Isolation of Long Double-Strande DNA Containing Specific Gene Sequences", Nucl. Acids Res., MA AS Reiser et al., "Transfer of Small DNA Fragments From Polyacrylamide Gels to Diazobengyloxymethyl Paper and Detection by Hybridization With DNA Probes," AT Biochemical and Bicphysical Research Communications, 85, pp. 1104-1112 (1978) EXAMINER Marsel DATE CONSIDERED 5-3-93 *EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 409; Draw line through citation if nor in confermence and not considered. Include capy of this form with next communication to applicant.

		1

*** PTO-14# U.S. DEPARTMENT OF COMMERCE (modified) 1280-4014 US4 Information Disclosure Statement ENZ-1 (C) Div 07/130.070 (Use several shoels if necessary) David C. Ward, et al. December 8, 1987 GROUP U.S. PATENT DOCUMENTS 1807 · EXAMINER ---DATE -CLASS 50 BCL 4 55 10 ALL 25 5 48 AC AD AE AF A G AH . AJ AK FOREIGN PATENT DOCUMENTS DATE COUNTRY CLASS TRANSLATION SUBCLASS YES . A 14 40 4. Other Documents (Including Author, Title, Date, Pertinent Peges, Etc.) P. W. J. Rigby et al., "Labeling Deoxyribonucleic Acid to MA . . High Specific Activity In Vitro by Nick Translation with Pp. 237-251 (1977) (AL G. T. Rudkin and R. D. Stollar^{*}, "High Resolution Detection of DNA-RNA Hybrids <u>in Situ</u> by Indirect Immunofluorescense, Nature, 265, pp. 472-473 (1977) EXAMINER DATE CONSIDERED 5-3-93 *EXAMINER: Initial if reference considered, whether or not citation is in conference with MPEP 609; Drew line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



. *	Infor	modif mati	ied on I	l) Disc	۰ <u>۲۰</u> ۱۱۰	FEM F 4M	THENT OF COMMIT	FRCE	1280-4014 U	5 4		18	2
		(Use s	led	βy,	AP	Plicar	Statement it Many/		ENZ-1 (C) D	C Was	07/1.	30,07	0
1									December 8	- Na	GROUP	11.	
j.	EXAMINER			_			· U.S. PAT	ENT C	OCUMENTS	, 1987	180	7	
F	INITIAL	9000	-	HUME	ER	DATE			IAME				
<i>\</i>	AA			Ш	П					CLAS	15 SU BCL.	A 53 1,p !	'LING
<u> </u>	A8	11		Π	П					\bot			
L	AC			+	Н							+	
	AD	\dashv	+	+	Н							-	
	AE		++	4	4	w.c				_		-	
		-++	++	41	Ц					+			
-	AP	-11	Ш	Ш						+			
<u> </u>	AG	11	П	П	T								
<u> </u>	AH	\prod	H	Π	+								
L	Al	TT	\sqcap	††	+							+-	
	AJ	11	╁	╁	╀						 	+-	
	AK	+++	1	H	4					 	+	-	
-		\coprod		Ш		- 1				!			
<u> </u>							FOREIGN PATE	ENTO	Octiment	<u> -</u>			
<u> </u>	00	COMEN.	TNUM	BER		PATE		UNTRY		· ·			
<u> </u>	AL	ПТ	П	T						CLASS	SUBCLASS	TRANS	
L	AM		\top	\forall	-	-+						-	HO
	AN	++	++	╫									├—
	40	++-	++	++									
		++	\sqcup	Ш									
-	AP	Ш	П	П	y -	•							
-		Ot	her	Do	cus	ents(neluding Author.	Title	Date, Pertinent Page				
IAM	\ \AR \	J.	L.	Rut	h	and D	. E. Berge		Sets, Pertinent Page	e, Etc.)	100		
(1)			P	rop	eo	Sides.	l. Synt	thes	m, "C-5 Subsis of C-5 Alsine Nucleos	titute	d Pyri	nidin	e
1			P	all	ad	ium I	ntermediat	Cyto Les	is of C-5 Al sine Nucleos " J. Org. Ch	ides v	ropyl, 'ia Orga	and	_
	188		þ	р.	28	70-28	76 (1978)	,	J. Org. Ch	em., 4	3,		_
	+++	м. з	So,	"C	har	actes	d = 4 + 1 + 1		****				_
100	\ AT []		ir	J.G	for	the	Synthesis	far	Escherichia Heat-Labile	coli	Plasmi	d Fac	
	1 17		2	lon	ınç DD.	0f t	he Toxin	Dete	Escherichi Heat-Labile rminant", Ir	Toxin	Mole	Cular	. oa-
EXAMI	ER	0.0					100 (19/8	,	-		n and	Immun	ity
	Andri	ML	mh	e			0.	ATEC	ONSIDERED				
· EXAMI	NER: Initial if	referenc		t idea	ed				ormance with MPEP (:
		-consid	ered.	inch	de e	opy of the	is form with next	n conf	ermance with MPEP (07; Drew 1	ine through c	1101.00.1	

							_			1				
· [F .v. 74) . i 4 e9	nod	i f i	ied			V	RTHENT OF COMMERCE	LATTY CO.		***	19	2
1	In	fon	ma+					_	A THE OFFICE	1280-4014 U	S 4		0.	- 2
			,,, P	ii	ed`	B	, y	pplic inec	Statement	ENZ-1 (C) D	iv. III	07/13	0.07	1
-		(0.39	301	vera	1 4	1001	1/ nec	saery)	David	C. Was	rd, et	-	_
										December of		GROUP	11.	
1.8	XAMINER								U.S. PATENT	December 8	, 1987	18		
100	ITIAL		00	CUM	ENT	NU		DAT						
1	- 1	AA	\neg	T	T		T	+-		MAME	71 41	S SUBCL	444	
		_	-1	+	+	Н	4	-		:	_	_		A DES
-		48	4	\perp	\perp	Ш	Ш	1				-	_ 1	
_		AC	- 1	1	П	П	T					1		
		40	\neg	\top	Н	+	+	-				_	+	
-			+	+	Н	4	\perp							
		A E			П	-1	1							
		F	T	П	\Box	+							\dashv	
		6	+	Н	+	+	Н				_		-	
		4	1	Ш	\perp	1	П						. 1	
	^_^	н	II	П	T	Τ	П		T .		_1			
	Al		П		7	+	Н		+				+-	
_		+	₩	+	+	Н	Ц				_		╀	
	AJ		Ц	\perp		П				<u> </u>	+		1	
	AK		П	T	T	П	\top				1			
				_		Ш	丄					+	+	
	\neg	_							FOREIGN PATENT	DOCUMENTS			1	
		000	CUM (ENT	NUM	• 6 5	١.	DATE	COUNT		-			_
	AL	II	T	Г	П	Т	\top			- 9	CLASS	SUBCLASS		
	AM	\sqcap	\top		H	+	┿						YES	
_		\vdash	4	Н	Ц	L	L	_						
	AM			П		Г	Γ					1	ĺ	1
	AO	\top	\top	Н	+	+	╆							+
	-	-+-	+	Н	+	╀	L							
	AP		\perp	П		1.	١.							ı
			0	th	er	Ď	0011	ment	Controlled		7			
	1 1		Α.	_		4 -			(Including Author, Title	, Dete, Pertinent Pag	00. E(C.)			
M	AR	\dashv	٠.											
	+				a	S	a	Polva	Davidson, "G din-Biotin In mine Bridge,"	teraction: U	und Gen se of C	e Enric	hmen	t
	1	- 1			3	99	(1978)	" pridde'.	Nucl. Acid:	Res.	5. pp	we-C	
	41	+					_			****		-, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	363	-
	+													
	1 1	M	١.	Sw	ie	-ke		led a						
	1!	⊣i			Po:	ĺχ	ıri	dvlid	d D. Shugar, Acid Analogu	"Poly 5-Ethy	luridy	110 200	-	
^	AT -	ı			(19	77)		uera vustode	J. Mol.	Biol	47 ACI	a, A	
		\perp					_	_				TIPP.	. 57-	67-
		1-	_	1	1		ຄ		184==	50				
MINE	A.	di	~	ĮV	(a	a	he	1	10012	CONSIDERED				
MIME	A.	di		10	a	av	he		OF not citation is in cashis form with next com	5-3-93				

FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.
1280-4014 US4
ENZ-1 (C) Div. III SERIAL NO. 07/130,070

INFORMATION	DISCLOSURE	CITATION

(Use several sheets if necessary)

APPLICANT	David C. Ward, et al.	
FILING DATE	GROUP	

									December 8, 1987		180	7	
								PAT	ENT DOCUMENTS				
EXAMIN ER INITIAL		DC	сим	ENT	NUMI	BER	18	DATE	NAME	CLAS S	SUBCL ASS	DA I APPR	ING ATE IF OPRIA E
		۰	-6-	7	7	-	7	1/10/78	Rubonstoin et al.	195	63		
MA	4	5	3	5	3	3	3	4/8/86	Kourilsky et al.	435	6, 7, 188 18, 810		
										ni UTGA			
								FOREIGN I	PATENT DOCUMENTS				
		DO	CUM	ENT I	NUMB	ER		DATE	COUNTRY	CLAS S	SUBCL ASS		SLATI
	+-			I .			-0-	44000		3	ASS	YES	NO
	-	,			,	-	,	4/18/33	United Kingdom Patem Application				
			0										
AM			ert Str	yer, B	iochen				ng Author, Title, Date, Pertinent Papers, Etc.,		omplex is the	First Ste	p In
	-												

Marsha 5-3-93 EXAMINER

							Ų				\blacksquare		Sheet	21 c	of		
FORM PTO	D-1449								OF COMMER DEMARK OFF		ATTY. DOCKET NO. 1280-4014 US4 ENZ-1 (C) Div. III	SERIAL	NO. 07/130,	070			
1	INFC	RMA	TIO	N DI	SCL	OSU.	RE (CITA	TION		APPLICANT	Ward, et al					
•		(Us	e seve	eral s	heets	if ne	cess	ary)			FILING DATE	GROUP					
											December 8, 1987 1807						
		_							PAT	ENT	DOCUMENTS						
EXAMINER INITIAL				DOCUM	ENT N	UMBEF	į		DATE		NAME	CLASS	SUBCLASS	FILING IF APPR	OPRIATE		
**;										\vdash		T					
-		-	\vdash		-	-	-	-	1	\vdash		-					
						l		1	1								
-		77		1		-			W - 5								
			-	_	_	_	_	╀	- 22								
			┢╾				 -	1				-					
						_	_	_	<u> </u>								
													Ì				
			_						FOREIGN P	ATE	NT DOCUMENTS	,					
				DOCUM	IENT N	UMBER			DATE		COUNTRY	CLASS	SUBCLASS	TRANS	LATION		
				_	·	1	T	Γ.	<u> </u>	<u> </u>				YES	NO		
			-	_			-	<u> </u>	ļ	<u> </u>							
			<u> </u>				<u> </u>	<u> </u>									
						-				1							
								T	ļ .								
		L	Ь			THE	R DO	CUM	ENTS (Includin	0 4111	thor, Title, Date, Pertinent Papers, Etc.)		L				
MA			1	ves, D Determ 1979)	.J., "I	ntersp	ecific :	Relatio	onships of Antib	iotic	Resistance in <u>Staphylococcus</u> -sp - Isolation rus aureus and <u>Staphylococcus epidermis</u> , <u>C</u>	and Comp	arison of Plass robiol. 25(12)	nids :1468-14	75		
AM AM			Kon <u>Q</u> 197	o, M.	therap IV+7	y, (Pro 36P (1	oceedi √ol. I)	ngs of ; 625F	the 10th Interna	ationa	the Tetracycline Resistance Plasmid in <u>Sta</u> il Congress of Chemotherapy, Vols. I and l Society for Microbiology: Washington, D	I. Zurich,	Switzerland,	Sept. 18-2			
pm			(Pro	ceedin	gs of 1 25P (\	he 10	th Inte	rnatio	nal Congress of	Cher	Tetracycline Resistance in <u>Staphylococcus</u> notherapy, Vols. I and II. Zurich, Switzerl- ology: Washington, D.C. USA (Siegenthale	and, Sept. 1	8-23, 1977. 3	CXIV + 73	36P 46-		

Shafferman, A. et al., "Cleavage Maps of a Tetracycline Plasmid from Staphylococcus aureus", J. Bacteriol. 134(1):345-348 (1978)

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

DATE CONSIDERED 5-3-93

FORM PTO-FB-AB20 (also form PTO-1449)

EXAMINER

												Sneet		1 23
FORM PTO	D-1449							OF COM		ATTY. DOCKET NO. 1280-4014 US4 ENZ-1 (C) Div. III	SERIAL	NO. 07/130	.070	
	INFORM	IATIO	N DI	SCL	OSU	RE (CITA	TION		APPLICANT David C	. Ward, et al			
	a	Jse sev	eral s	sheets	s if no	ecess	ary)			FILING DATE	GROUP			
										December 8, 1987		180	7	
								F	PATENT	DOCUMENTS				
EXAMINER INITIAL			DOCUM	MENT N	UMBEI	R_		DATE		NAME	CLASS	SUBCLASS	FILING IF APPR	DATE OPRIATE
				ı										
			1	Т	1	t	1	T	-		_			
			_	<u> </u>		1		<u> </u>						
			İ				1							
		+	╁	 	+	+	\vdash	 	\dashv					
							*							
-														
		+	-	┼		-	+	<u> </u>		*	-			
			İ											
						1			1					
		+	\vdash	▙	\vdash	\vdash	\vdash							
					1									
						Ŋ.	(Tri		- 5 - 7					
			_			1	_	FORFIG	N PATE	NT DOCUMENTS				
								l	1		1		TRANS	LATION
			DOCUM	MENT N	UMBER	2		DATE		COUNTRY	CLASS	SUBCLASS	YES	NO
													-	
		1	\vdash											
			T	†			1							
			1	<u> </u>	OTUE	D DO	CIDA	ENITE A		hor, Title, Date, Pertinent Papers, Etc.)		L	l	L
		Inc	14											
MIN			68(2):5				spnage	S-1 Denvi	ilive that	Fransduces Tetracycline Resistance to <u>St</u>	ipnyiococcus	aureus", viro	logy	
AM		Asl	neshov	, Е.Н.	, "The	Genet	tics of	Tetracyclin	nc Resistar	nce in <u>Staphylococcus aureus</u> ", <u>J. Gen. N</u>	ficrobiol. 88(1):132-140 (1	975)	
MA MA		1 :	Extracl	hromo	somal	Inheri	tance is	n Bacteria;	23rd Ann	stance to Tetracycline", Contributions to ual OHOLO Biological Conference, Safe rk, N.Y. USA (Hertman I. et al. (Ed.)),	d, Israel, Ap	r. 21-24, 197		1. 6,
AM								e Resistan Abstract 88		domonas aeruginosa Containing the R Pl	asmid RP-1",	Abstracts of	the Annu	<u>al</u>
EXAMINE	R A	din	m	las	hos	(DATE CONSIDERED 5-3-93	T.			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO	D-1449				U. PA	S. DEI	AND	MENT TRAI	OF COMMI	ERCE FICE	E ATTY. DOCKET NO. 1280-4014 US4 ENZ-1 (C) Div. III 07/130,070					
:	INFO	RMA	TIO	N DI	SCL	OSU	RE C	CITA	TION		APPLICANT David C.	J		,070		
		(Us	e sev	eral s	sheets	if ne	cesso	ry)			FILING DATE	GROUP				
											December 8, 1987	,	180	7		
									PA	TENT	DOCUMENTS					
EXAMINER INITIAL				DOCUM	MENT N	UMBER			DATE		NAME	CLASS	at more a co	FILING	DATE	
Z. T. Z.		1	Π	Local	T	T T	Ϊ	Γ	DATE	1	NAME	CLASS	SUBCLASS	IF APPR	OPRIATE	
	 		 	-	\vdash	+	┢	-	-	╁		.				
					L					1						
						ļ				1		<u> </u>		<u> </u>		
		-	-		┢	-	-	<u> </u>		-		ļ	-			
	-					-				+		Ì				
		_	_		_	ļ				4_						
ž.												ļ				
				F					ir m			11 11 1				
									FOREIGN	PATE	NT DOCUMENTS					
				DOCUM	MENT N	UMBER			DATE		COUNTRY	CLASS	SUBCLASS	TRANS	LATION	
				1	1	1	·	_		+		CLASS	SUBCLASS	YES	NO	
				<u> </u>	_	<u> </u>										
										1						
				 	\vdash	\vdash	-	\vdash	 	+		 			 	
			<u> </u>	<u> </u>	<u> </u>				L			J			<u> </u>	
1.00			IIbe	kote l							hor, Title, Date, Pertinent Papers, Etc.) Tetracycline, Chloramphenicol, Macrolide	a Tinaamı	rain and Clin			
1~			,	with Pl	hages	Induce	from	Strept	ococcus pyro	genes",	J. Antibiot. 28:681-688 (1975)	s, Lincomy	em, and em	uamyem		
AM			Bisv 1	was, G 1210 (1	. et al 1976)	., "Chi	romoso	omal L	ocation of Ar	ntibiotic	Resistance Genes in Neisseria gonorrhoea	e", <u>J. Bacte</u>	riol. 125(3):1	207-		
MW			Wai	mer, P Microb	F. et piol. 1	al., "F 17:103	olyge: -110 (1	nes and 1980)	d Modifier G	enes for	Tetracycline and Penicillin Resistance in 1	Veisseria go	norrhoeae", l	I. Gen.		
AM			Van	Der I Beta-G	Ploeg, lobin	L.H.T Gene E	. et al.	, "Gai	mma-Beta-Th Man", <u>Natur</u>	alassem g (Lond	ia Studies Showing That Deletion of the Ga 1) 283:637-642 (1980)	mma- and	Delta-Genes	Influences	•	
EXAMINE	R /	And	m.	m	ns	che	_				DATE CONSIDERED 5-3-	93				
EXAMINEI considered.	R: Init	al if re	ferenc	e cons	idered	, wheth	er or	not cit	ation is in co to applicant.	nforma	nce with MPEP 609; Draw line through cit	ation if not	in conforman	ice and no	ot .	

FORM PTO	0-1449								OF COMME									
	INFO	RMA	TIO	N DI	SCL	OSU	RE C	CITA	TION		APPLICANT	Ward, et al						
		(Us	e seve	eral s	heets	if ne	ecesso	ary)			FILING DATE	GROUP						
											December 8, 1987		180	,				
									PA	TENT	DOCUMENTS							
EXAMINER INITIAL		· .		DOCUM	MENT N	UMBER			DATE		NAME	CLASS	SUBCLASS	FILING IF APPRO	DATE			
			T		t	T		t		<u> </u>		<u> </u>						
	-		_	_	<u> </u>	<u> </u>	<u> </u>		ļ	-								
					Ī													
	 	-	╁		╁	╫	 	\vdash	-	+		1						
					L		L											
			i															
	t		Т		H	t^-	H		† · · · · ·	_								
	ļ			<u> </u>	├	├	├	<u> </u>		-								
						13	-					LF U	61 = 1					
									FOREIGN	PATE	NT DOCUMENTS							
				DOCUM	IENT N	UMBER			DATE		COUNTRY	CLASS	SUBCLASS	TRANS	LATION			
	_		_		г	_		1		+-				YES	NO			
		ļ	-	_	ļ	ـ	_	ļ		<u> </u>		-						
						<u> </u>												
										1		1						
			<u> </u>	-		 	-	\vdash	1	+								
	L	l	<u> </u>		Ц.					<u> </u>			l		İ			
		Γ	Lan	er I							thor, Title, Date, Pertinent Papers, Etc.) uman Alpha-Like Globin Genes - Sequence	Vomelegy	and Alpha Gl	obio				
AM			-	Gene I	Deletio	ns", <u>C</u>	<u>ell</u> 20((1):119)-130 (1980)	. OI III	man Apna-Like Gloom Genes - Sequence	nomology	and Alpha-O	OUII				
am.			Frit	sch et 279:59	al., "0 8-603	Charact (1979)	terizati	ion of	Deletions Whi	ich Aff	ect the Expression of Fetal Globin Genes in	n Man", <u>N</u> a	ture (Lond)		-			
4.00			Inni	8, M.	A. ct a	ıl., "Al	pha-F	etoprot	tein Gene Exp	ression	- Partial DNA Sequence and COOH-Terr	ninal Homo	ology to					
N,			,	Albumi	in", <u>J.</u>	Biol.	Chem.	255(1	19):8994-8996	(1980)	· · · · · · · · · · · · · · · · · · ·							
AM AM			'	10(1):5	3-61 ((1980)		loning	of DNA Con	npleme	ntary to a Mouse Alpha-Fetoprotein mRNA	Sequence'	, <u>Gene</u>					
EXAMINE	TIMER Arim Marshel DATE CONSIDERED 5-3-93											3						
EXAMINE considered.	R: Init										ance with MPEP 609; Draw line through citation if not in conformance and not							

FORM PT				,	PA	TENT	AND	TRAL	OF COMME		E 1280-4014 US4 ENZ-1 (C) Div. III 07/130,070				
•	INFO	RMA	TIO	N DI	SCL	OSUI	RE C	ITA'	TION		APPLICANT David C. V	Ward, et al		-	
		(Use	e seve	eral s	heets	if ne	cesso	ry)			FILING DATE	GROUP			
											December 8, 1987		1807	,	
		_							PAT	ENT	DOCUMENTS				
EXAMINER INITIAL				DOCUM	MENT N	UMBER			DATE	_	NAME	CLASS	SUBCLASS	FILING IF APPR	DATE OPRIATE
										l					
			-	-	┢	\vdash	H					 			
			_	_	<u> </u>	₩	<u> </u>	ļ		ļ		<u> </u>		<u> </u>	
									-						
		19													
				\vdash	\vdash	\vdash	\vdash	\vdash				 			
			_	<u> </u>	_	ऻ	_	<u> </u>		-		<u> </u>	100		
													-		
					_	<u> </u>	-	-		-		-		-	
3		<u> </u>	L			<u>L</u>	L		<u></u>					<u> </u>	
	г	ı -							FOREIGN P	ATE	NT DOCUMENTS			r	
			1	DOCUM	ENT N	UMBER			DATE		COUNTRY	CLASS	SUBCLASS	TRANSI	NO
	_					T						_			
					-	\vdash	-								
					_	-	_	\vdash		\vdash					
			_			▙	_				- · · · · · · · · · · · · · · · · · · ·				
						ЭТНЕ	R DO	CUME	ENTS (Includin	g Aut	hor, Title, Date, Pertinent Papers, Etc.)				
AM			CY 163:	f. Lee : 561-5	et al. 569 (19	"8-(6 974)	Amino	hexyl)	-Amino-Adeni	ne Nu	cleotide Derivatives For Affinity Chromato	graphy", <u>A</u>	rch. Biochem	. Biophy	<u>s.</u>
AM			Tray <u>J</u>	er et : . (197-	d., *Р 4) 139	reparat :609-6	tion of	Aden	osine Nucleotid	le Der	ivatives Suitable for Affinity Chromatograp	hy", <u>Bioch</u>	em.		
-	_														
											·				
EXAMINE	R	Ar	dir	- 7.	Nau	oshe	1				DATE CONSIDERED 5-3-9	3			
EXAMINE considered.	R: Initi	ial if re	ference of this	consi	dered with 1	, wheth	ner or	not cita	ation is in conf to applicant.	ormai	nce with MPEP 609; Draw line through cite	ition if not	in conforman	ce and no	t .